

REMARKS

Claims 1–14, 18, 20, 22–26, 28, 30–35, 39–42, and 45–47 are pending in this application. By this Amendment, claims 28 and 39 are amended and claims 45–47 are added. Support for the amendments to claims 28 and 39 can be found, for example, in paragraphs [0214]–[0222] of the original specification. Support for the new claims 45–47 can be found, for example, in paragraphs, [0108], [0110], and [0131] of the original specification and Fig. 4. No new matter is added. Applicants respectfully request reconsideration and prompt allowance of the pending claims for at least the following remarks.

The courtesies extended to Applicants' representatives by Examiners Khan and Edwards at the interview held April 14, 2009, are appreciated. The reasons presented at the interview as warranting favorable action are incorporated into the remarks below, which constitute Applicants' record of the interview. Specifically, claims 28 and 39 are amended as suggested by Examiner Khan.

I. The Claims Define Patentable Subject Matter

A. §103(a) Rejection over Nysen, Rodgers, and MacLellan

1. Claims 1–12 and 45–47

The Office Action rejects claims 1–14, 18, 25, 26, 28, 30–33, 35, and 39–42 under 35 U.S.C. §103(a) over U.S. Patent No. 6,107,910 (Nysen) in view of U.S. Patent No. 6,362,737 (Rodgers) and U.S. Patent No. 5,940,006 (MacLellan). Applicants respectfully traverse the rejection.

Nysen in view of Rodgers and MacLellan fail to disclose and would not have rendered obvious "a distance detecting portion operable to detect a distance between said interrogator and said endpoint device," as recited in claims 1 and 12.

During the April 14 personal interview, Examiner Khan First alleged the above references disclose the recitation by citing Nysen's column 38, lines 15–40, which discusses a

received signal strength indicator (RSSI) that determines the signal strength of the received signal from the tag. However, even considering the disclosure of the RSSI, Nysen's system is unable to detect or determine the distance between the interrogator and the tag.

As repeatedly asserted before, a system that is able to detect the signal strength of the received signal with an RSSI circuit can only determine the distance between the receiver and the transmitter if the system also knows or can determine the signal strength of the transmitted signal. This is because the strength of a received signal strength depends on both the distance the signal traveled between the transmission and the reception, and the strength of the signal at the point of transmission. Nysen fails to disclose that the system knows or can determine the signal strength of the transmitted signal. Thus, Nysen's system cannot determine the distance between the interrogator and the tag.

Examiner Khan further alleged that, because Nysen's interrogator can only detect tags that are in cars traveling in Lane 1, the interrogator indirectly determines the distance of a tag when the tag is detected. In other words, every tag that is detected is a distance of 5–25 ft away from the interrogator. However, even this allegation fails to disclose the recitations in claims 1 and 12.

For example, claim 1 recites "[a]n endpoint device for use in a communication system . . . said endpoint device comprising: a distance detecting portion operable to detect a distance between said interrogator and said endpoint device is directed to an endpoint device for use in a communication system." Thus, the distance detecting portion recited in claim 1 is part of the endpoint device and not the interrogator. Nysen disclosing an interrogator that indirectly detects a distance does not disclose an endpoint device that detects a distance, at least because an endpoint device is not an interrogator and because the tags in Nysen respond regardless of whether they are less than or more than 25 feet away from the interrogator (*see*

Nysen C35:L18–36 (discussing the signal from adjacent Lane 2, requiring that the tags in Lane 2 still respond regardless of being more than 25 feet away)).

Further, although the distance detecting portion in claim 12 is part of the interrogator, claim 12 recites that the distance is detected on the "basis of an intensity of a modulating signal with which said reflected signal has been modulated in said endpoint device."

Detecting a distance on the basis of a limiting distance of the reception of a signal, as alleged in the Office Action, does not constitute detecting the distance on the basis of an intensity of the signal. Thus, regardless of whether Nysen's interrogator indirectly detects the distance, the interrogator still does not detect the distance according to the feature recited in claim 12.

The Office Action also alleges that the remarks of the Amendment filed June 16, 2008 admit that Nysen discloses detecting a distance between an antenna and a tag. The remarks do not admit this allegation. Rather, the remarks at page 18, paragraph 2, of the Amendment discuss that Nysen discloses "[i]t is possible to tailor the distances in actual set up very accurately by locating the antenna at the desired distance from the tag even though the transmitter, receiver/detector and decoder are located somewhere else. . . . The antenna is the only component of the system whose location is critical' (Nysen, col. 35, lines 12-15)." Based on this disclosure, the system in Nysen would not be able to detect the distance between the receiver and the tag because the receiver is not necessarily placed with the antenna. Thus, hypothetically, even if a distance were detected in Nysen, it would be the distance between the antenna and the tag and not the distance between the interrogator and the tag.

Based on the foregoing, Nysen in view of Rodgers and MacLellan fail to disclose and would not have rendered obvious the distance detecting portions of claims 1 and 12. Thus, claims 1 and 12 are patentable over Nysen in view of Rodgers and MacLellan. Claims 2–11, which depend from claim 1, are patentable, at least for the same reasons, as well as the additional features they recite. Thus, Applicants respectfully request withdrawal of the

rejection of claims 1–11. Further, claims 45–47, which depend from claim 1, are also patentable over Nysen, Rodgers, and MacLellan. Specifically, claims 45–47 recite in specific detail the characteristics of the distance detecting portions.

2. Claims 28, 30–35, and 34–42

Nysen in view of Rodgers and MacLellan fail to disclose and would not have rendered obvious "a power-source-information detecting portion operable to detect at least two discrete operating states of said battery cell, the at least two discrete operating states of the battery cell being at least able to power the endpoint device," as recited in claim 28, and "a power-source-information detecting portion operable to detect supply-voltage information indicative of at least two discrete supply voltages of said battery cell, the at least two discrete supply voltages of the battery cell being at least able to power the endpoint device," as recited in claim 39. Rather, as agreed to during the April 14 personal interview, merely detecting an operating state where a battery cell can and cannot power a device, or a supply voltage of a battery cell that can and cannot power a device, does not disclose and would not have rendered obvious at least two discrete operating states and supply-voltages of a battery cell, excluding the state where the operating states and supply-voltages cannot power the endpoint device. Nor does controlling the distribution of the frequency utilization ratio of the subcarrier signal on the basis of whether the battery cell can power a device disclose "wherein said frequency-utilization-ratio setting portion is operable on the basis of one of the at least two discrete operating states of said battery cell detected by said power-source-information detecting portion to set the distribution of the frequency utilization ratio of the subcarrier signal," as recited in claim 28, and "the individual-frequency-utilization-ratio setting portion being operable to set the distribution of said individual frequency utilization ratio of the subcarrier signal of said each endpoint device, on the basis of said switching information generated by said switching-information generating portion and one of the at least two discrete supply

voltages of said battery cell detected by said power-source-information detecting portion," as recited in claim 39.

Accordingly, claims 28 and 39 are patentable over Nysen in view of Rodgers and MacLellan. Claims 30–35 and 40–42 are also patentable, which respectively depend from claims 28 and 39, at least for the same reasons, as well as for the additional features the claims recite. Applicants respectfully request withdrawal of the rejection of claims 28, 30–35, and 39–42.

3. Claims 13, 18, 20, and 22–26

Regarding claims 13 and 26, Nysen in view of Rodgers and MacLellan fail to disclose and would not have rendered obvious "an available-band determining portion operable to determine an available frequency band of a subcarrier signal available for said at least one endpoint device on the basis of said condition of communication detected by said communication-condition detecting portion."

The Office Action cites MacLellan as allegedly disclosing this feature (Office Action at page 5). However, MacLellan explicitly states that "as long as the Subcarrier 908 frequency is large enough to support [a] data rate, as discussed above, the actual Subcarrier 908 frequency need not be altered" (MacLellan C15:L57–58). The available-band determining portion recited in the claims is determining or adjusting the frequency band on the basis of the communication-condition-detecting portion in response to, for example, collisions or a certain collision rate. Thus, MacLellan teaching not to change the frequency does not disclose changing the frequency as recited in claims 13 and 26, and Nysen in view of Rodgers and MacLellan fail to disclose and would not have rendered obvious claims 13 and 26. Thus, claims 13 and 26 are patentable. Claims 14, 18, 20, and 22–25 are patentable, for at least the same reasons, as well as for the additional features the claims recite. Applicants respectfully request withdrawal of the rejection of claims 13, 18, 20, and 22–26.

B. §103(a) Rejections over Nysen, Rodgers, MacLellan, Takatori, and Butovitsch

The Office Action rejects claim 34 under 35 U.S.C. §103(a) over Nysen in view of Rodgers and MacLellan in further view of U.S. Patent Application Publication No. 2001/0020897 (Takatori) and rejects claims 20 and 22–24 under 35 U.S.C. §103(a) over Nysen in view of Rodgers and MacLellan in further view of U.S. Patent No. 6,792,276 (Butovitsch). Applicants respectfully traverse the rejections.

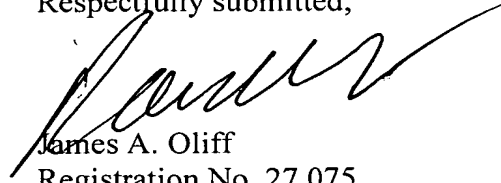
These rejections are premised upon the presumption that Nysen, Rodgers, and MacLellan disclose or suggest all of the features of claims 13 and 28. Because, as discussed above, Nysen, Rodgers, and MacLellan do not disclose or suggest all of the features of claims 13 and 28, the rejection is improper. Therefore, Applicants respectfully request withdrawal of the rejection to claims 20, 22–24, and 34.

II. Conclusion

In view of the foregoing, it is respectfully submitted that this application is in condition for allowance. Favorable reconsideration and prompt allowance of the claims are earnestly solicited.

Should the Examiner believe that anything further would be desirable in order to place this application in even better condition for allowance, the Examiner is invited to contact the undersigned at the telephone number set forth below.

Respectfully submitted,



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